--17. (Amended) The method for producing xylitol or D-xylulose, which comprises:

culturing a bacterium having an ability to produce xylitol or D-xylulose from glucose in a suitable medium to accumulate xylitol or D-xylulose in the medium, and

collecting xylitol or D-xylulose from the medium,

wherein an evolutionary distance of the bacterium, calculated by CLUSTAL W based on the 16S rRNA gene nucleotide sequences, which respect to *Acetobacter methanolicus* is not more than evolutionary distance between *Acetobacter methanolicus* and *Acetobacter pasteurianus*, and an evolutionary distance of the bacterium with respect to *Acetobacter pasteurianus* is not more than an evolutionary distance between *Acetobacter methanolicus* and *Acetobacter pasteurianus*, and

wherein the bacterium has the following characteristics:

(a) an ability to produce xylitol or D-xylulose from glucose;

(b) quinone type: ubiquinone-10;

(c) GC content of DNA: about 56 to 57%;

(d) an ability to produce acetic acid from ethanol; and

(e) grows in the presence of 30% glucose.

18. (Amended) The method according to claim 17, wherein the bacterium belongs to the genus *Asaia*.

19. (Amended) The method according to claim 18, wherein the bacterium belongs to *Asaia ethanolifaciens*.

20. (Amended) The method according to claim 19, wherein the bacterium has a 16S rRNA gene comprising the nucleotide sequence of SEQ ID NO: 1.

22. (Amended) A method for producing xylitol or D-xylulose, which comprises:

culturing a bacterium having an ability to produce xylitol or D-xylulose from glucose in a suitable medium to accumulate xylitol or D-xylulose in the medium, and

wherein an evolutionary distance of the bacterium, calculated by CLUSTAL W based on the 16S rRNA gene nucleotide sequences, with respect to *Gluconobacter oxydans* subsp. *oxydans* is not more than an evolutionary distance between *Gluconobacter oxydans* subsp. *oxydans* and *Acetobacter aceti*, and an evolutionary distance of the bacterium with respect to *Acetobacter aceti* is not more than an evolutionary distance between *Gluconobacter oxydans* subsp. *oxydans* and *Acetobacter aceti*, and

wherein the bacterium has the following characteristics:

(a) an ability to produce xylitol or D-xylulose from glucose;

(b) quinone type: ubiquinone-10;

(c) GC content of DNA: about 52 to 53%;

(d) an weak ability to produce acetic acid from ethanol; and

(e) grows in the presence of 30% glucose.

23. (Amended) The method according to claim 22, wherein the bacterium belongs to the genus *Zucharibacteri*.

24. (Amended) The method according to claim 23, wherein the bacterium belongs to *Zucharibacter floricola*.

25. (Amended) The method according to claim 24, wherein the bacterium has a 16S rRNA gene comprising the nucleotide sequence of any one of SEQ ID Nos: 2, 3, 4 or 5.--